

## INITIAL REVIEW EXPOSURE REPORT

Chemical ID: Jeffamine DA drum

Assessor:

### ENVIRONMENTAL RELEASES

Scenario#:1

Number of Release Sites: 1.

Release Activity: Drum cleaning by contractor

Release Description:	WATER	LANDFILL Non-sludge/Sludge	STACK	FUGITIVE
Total Releases:	31.20 (kg/yr)	0.45 (kg/yr)	0.00 (kg/yr)	6.74E-15 (kg/yr)
Non-sludge/Sludge				
Release Days/yr:	10.00	0.00/10.00	0.00	10.00
Per Site Release:	3.12 (kg/site/day)	0.00/4.52E-02 (kg/site/day)	0.00 (kg/site/day)	6.74E-16 (kg/site/day)

Remarks:

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SITE-SPECIFIC HUMAN AND AQUATIC EXPOSURES TO SURFACE WATER RELEASES: LAKES, BAYS, ESTUARIES, AND OCEANS		
SCENARIO #: 1	RELEASE ACTIVITY: Drum cleaning by contractor	
FACILITY NAME: MIDDLESEX CNTY UA		
FACILITY LOCATION: SAYREVILLE NJ 08872		
RECEIVING WATER NAME: RARITAN BAY		
REACH NUMBER: 02030104005	FACILITY ON REACH: Yes	DISCHARGE TYPE: Direct
NPDES PERMIT #: NJ0020141	EXPOSED POPULATION: Adult	

WWT REMOVAL (%)	RELEASE DAYS	PLANT FLOW (MLD)	PRETREAT RELEASE (kg/site/day)	POST-TREAT RELEASE (kg/site/day)	BCF (L/kg)
21.98	10.	321.00	3.12	2.43	3.16

AQUATIC EXPOSURE ESTIMATES		
MIXING ZONE	DILUTION FACTOR	WATER CONCENTRATION (ug/L)
ACUTE SCENARIO	5.00	1.52
CHRONIC SCENARIO	10.00	0.76

FISH INGESTION EXPOSURE ESTIMATES					
Exposure Units	Results	ASSUMPTIONS			
		ED (years)	AT (years)	BW (kg)	IR (g/day)
Cancer					
LADD <sub>pot</sub> (mg/kg/day)	2.61E-09	33.00	78.00	80.00	7.50
LADC <sub>pot</sub> (mg/kg)	2.78E-05	33.00	78.00	NA	NA
Acute					
ADR <sub>pot</sub> (mg/kg/day)	1.67E-05	NA	1 day	80.00	279.00

Lakes Comments:

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## DRINKING WATER EXPOSURE ESTIMATES FROM LANDFILL RELEASES

SCENARIO #: 1

ACTIVITY: Drum cleaning by contractor

RELEASE DESCRIPTION:

EXPOSED POPULATION: Adult

NUMBER OF SITES	NON-SLUDGE LANDFILL RELEASE AND DAYS OF RELEASE (kg/site/day)/(days)	LANDFILLED SLUDGE <sup>1</sup> AND DAYS OF RELEASE (kg/site/day)/(days)	MIGRATION DESCRIPTOR <sup>2</sup>	ADSORPTION TO WASTEWATER SLUDGE (%)	DRINKING WATER TREATMENT (%)
1.	0.00/0.00	4.52E-02/10.00	Rapid	1.45	0.00

<sup>1</sup> Landfilled sludge equals the fraction adsorbed to wastewater treatment sludge times the surface water pre-treatment release.

<sup>2</sup> Migration Descriptor	Log Koc	Groundwater Concentration (GWC) (mg/L per kg release)
Negligible	no migration	None
Negligible to slow	> 4.5	3.21E-6
Slow	<4.5 to 3.5	2.67E-5
Moderate	<3.5 to 2.5	5.95E-5
Rapid	<2.5	7.55E-5

Exposure Units	Results	ASSUMPTIONS			
		ED (years)	AT (years)	BW (kg)	IR (L/day)
Cancer					
LADD <sub>pot</sub> (mg/kg/day)	1.88E-07	33.00	78.00	80.00	1.04
LADC <sub>pot</sub> (mg/L)	1.44E-05	33.00	78.00	NA	NA

REMARKS:

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## INHALATION EXPOSURE ESTIMATES (POST-TREATMENT)

SCENARIO #: 1 RELEASE ACTIVITY: Drum cleaning by contractor

RELEASE DESCRIPTION:

METHOD OF CALCULATION: Screen3

EXPOSED POPULATION: Adult

Number of Sites:	1.
Per Site Fugitive Release:	6.74E-16 kg/site/day
Fugitive Release Days per Year:	10.00 days
% Removal via Fugitive Release:	0.00 %
Total Fugitive Release:	6.74E-15 kg/yr
Max Annual Average Air Concentration (Fugitive):	2.02E-16 µg/m <sup>3</sup>
Max 24 Hour Average Air Concentration(Fugitive):	9.21E-14 µg/m <sup>3</sup>
Per Site Stack Release:	NA kg/site/day
Stack Release Days per Year:	NA days
% Removal via Stack Release:	0.00 %
Total Stack Release:	NA kg/yr
Max Annual Average Air Concentration (Stack):	0.00 µg/m <sup>3</sup>
Max 24 Hour Average Air Concentration (Stack):	0.00 µg/m <sup>3</sup>

Exposure Units	Results (Stack)	Results (Fugitive)	ASSUMPTIONS			
			ED (years)	AT (years)	BW (kg)	Inh. Rate (m³/hr)
Cancer						
LADD <sub>pot</sub> (mg/kg/day)	0.00	1.56E-20	33.00	78.00	80.00	0.61
LADC <sub>pot</sub> (mg/m³)	0.00	8.55E-20	33.00	78.00	NA	NA
Acute						
ADR <sub>pot</sub> (mg/kg/day)	0.00	1.69E-17	NA	1 day	80.00	0.61

Inhalation Comments:

Stack Parameter Data

Stack Height	10.00
Inside Stack Diameter:	0.10
Stack Gas Exit Velocity:	0.10
Stack Gas Temperature:	293.00

Fugitive Parameter Data

Release Height:	3.00	m
Length of Release Opening:	10.00	m
Width of Release Opening:	10.00	m

Meteorological and Terrain Information:

Surrounding Land Use:	Rural	
Terrain Height:	0.00	m
Distance to Residence of Interest:	100.00	m
Meteorological Class:	Full	
Stability Class:	NA	
Wind Speed:	NA	

Downwash Information:

Facility Length:	NA	m
Facility Width:	NA	m
Facility Height:	NA	m